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a) $y(n) = 2x(n) + 3x(n-1)$

$$h(n) = 2\delta(n) + 3\delta(n-1)$$

$$y(n) = \sum 2x(k) \cdot \delta(n-k) + \sum 3x(k-1) \cdot \delta(n-k)$$

$$y(n) = \delta(n-k) \cdot \sum_{k=-\infty}^{+\infty} (2x(k) + 3x(k-1))$$

$$\Rightarrow h(n) = T[\delta(n-k)]$$

Bài 2: $x(n) = \{1, 2, 3, 1\}$; $h(n) = \{1, 2, 1, -1\}$

$$y(n) = \sum_{k=0}^n x(k) \cdot h(n-k)$$

$$\Rightarrow y(0) = \sum_{k=0}^3 x(k) \cdot h(0-k) = x(0) \cdot h(0) = 1$$

$$y(1) = \sum_{k=0}^3 x(k) \cdot h(1-k) = x(0)h(1) + x(1)h(0) = 4$$

$$y(2) = x(0)h(2) + x(1)h(1) + x(2)h(0) = 8$$

$$y(3) = x(0)h(3) + x(1)h(2) + x(2)h(1) + x(3)h(0) = 8$$

Tương tự: $y(4) = 3$, $y(5) = -2$, $y(6) = -1$